

G034
2,6-Di-*tert*-butylphenol [128-39-2]

Results of Testing

Chemical Name	CAS No.	Study Code/Type	Protocol/Guideline	Species	Exposure	Dose/Concentration	No. per Group	Results	Reference
2,6-Di- <i>tert</i> -butyl-phenol	128-39-2	EEATOX Acute toxicity	40 CFR 797.1050 (modified)	<i>Selenastrum capricornutum</i> (freshwater algae)	static, 96 hr	0.33, 0.63, 1.2, 2.1, 2.9, 7.2 mg/L (measured)	Not applicable	Reduction in cell density after 24, 48, 72, and 96 hours of exposure (relative to control). The 96-hour EC ₅₀ was determined to be 3.9 mg/L (initial) and 1.2 mg/L (TWA). The 96-hour NOEC was determined to be 2.1 mg/L (initial) and 0.64 mg/L (TWA).	OTS0534319
2,6-Di- <i>tert</i> -butyl-phenol	128-39-2	EEATOX Acute toxicity	40 CFR 797.1400 (modified)	<i>Salmo gairdneri</i> (rainbow trout)	flow-through, 14 days	0, 0.27, 0.41, 0.63, 0.98, 1.5 mg/L	20/group	Following 14 days of testing, 95% of the fish exposed to the highest test concentration died. At test termination (day 14), 20, 65, 10, and 20% mortality was observed at 0.27, 0.41, 0.63, and 0.98 mg/L, respectively. The 14-day LC ₅₀ was estimated to be 0.74 mg/L. The test substance does not appear to be chronically toxic to rainbow trout. The NOEC was determined to be < 0.21 mg/L (lowest tested concentration).	OTS0526680
2,6-Di- <i>tert</i> -butyl-phenol	128-39-2	EEATOX Acute toxicity	40 CFR 797.1400 (modified)	<i>Pimephales promelas</i> (fathead minnow)	flow-through, 14 days	0, 0.30, 0.38, 0.60, 0.85, 1.4 mg/L (measured)	20/group	All fish exposed to 1.4 mg/L died within the initial 9 days of the test. At test termination (day 14) 15% mortality was observed at 0.85 mg/L while no mortalities occurred at the remaining treatment levels. The 14-day LC ₅₀ was estimated to be 1.0 mg/L. The test substance does not appear to be chronically toxic to fathead minnows. The NOEC for the 14-day study was 0.30 mg/L.	OTS0526678
2,6-Di- <i>tert</i> -butyl-phenol	128-39-2	EEATOX Acute toxicity	40 CFR 797.1310	<i>Gammarus fasciatus</i> (gammarus)	flow-through, 4 day	0, 0.23, 0.38, 0.54, 0.80, 1.1 mg/L (measured)	20/group	Following 96 hours of exposure, 100, 85, and 30% mortality was observed at 1.1, 0.80, and 0.54 mg/L, respectively. Mortalities of <10% was observed at the remaining treatment levels. The 96-hour LC ₅₀ value was determined to be 0.60 mg/L and the NOEC value was 0.38 mg/L.	OTS0526678
2,6-Di- <i>tert</i> -butyl-phenol	128-39-2	EEATOX Acute toxicity	40 CFR 797.1300	<i>Daphnia magna</i>	48 hr	0, 0.076, 0.14, 0.21, 0.38, 0.59 mg/L (measured)	20/group (10/replicate)	At 1.0 mg/L, all daphnids were immobilized after 48-hours. Immobilization of <10% was observed at the remaining concentrations, however, treatment-related sublethal effects were observed at levels >0.14 mg/L. The 48-hour EC ₅₀ value was determined to be 0.45 mg/L and the NOEC was determined to be 0.76 mg/L.	OTS0526678
2,6-Di- <i>tert</i> -butyl-phenol	128-39-2	EFADEGPOT Photolysis	40 CFR 796.3765	Not applicable	Sunlight, synthetic humic water and pure water (pH 7.0 buffer)	Not applicable	Not applicable	The effect of sunlight on the degradation of aqueous solutions of the test substance in synthetic humic water (SHW) and pure water (PW) (pH 7.0 buffer) was investigated. The ratio (Kp)SHW / (Kp)PW was 1.36 and suggest that the test substance is marginally susceptible to indirect photolysis.	OTS0544324

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2,6-Di- <i>tert</i> -butylphenol	128-39-2	EFBDEG Anaerobic Biodegradability	40 CFR 796.3140	Not applicable	anaerobic, primary sludge inoculum, 56 days	63 mg/L	Not applicable	The test substance did not degrade under the conditions of this study.	OTS0544324
2,6-Di- <i>tert</i> -butylphenol	128-39-2	EFPCHEVPRE Vapor pressure	Non-TSCA Protocol/ Guideline	Not applicable	20 °C	Not applicable	Not applicable	The spiking levels and mean percent desorption efficiencies were as follows: 0.0565 mg, 86.2%; 0.113 mg, 86.0%; 0.170 mg, 84.4%. The vapor pressure at the different flow rates showed no significant (>5%) differences. The flow rates and calculated vapor pressures were as follows: 14.2 mL/min, 0.0073 mmHg; 25.9 mL/min, 0.0076 mmHg; 34.6 mL/min, 0.0079 mmHg.	OTS0526677
2,6-Di- <i>tert</i> -butylphenol	128-39-2	EFPCHEWSOL Water solubility	40 CFR 796.1860	Not applicable	Column generator, pH 5, 7, and 9	Not applicable	Not applicable	The water solubility of the test substance in water at pH 5, 7, and 9 was determined to be 3.99, 4.11, and 4.69 mg/L, respectively.	OTS0526677